

REMARKS

Prior to entry of this amendment, claims 1-15 are currently pending in the subject application. Claims 16-19 have been added. Claims 1, 7, 11 and 12 are independent. No new matter has been added.

Applicants appreciate the Examiner's acknowledgement of applicants' claim for foreign priority and receipt of a certified copy of the priority document.

Applicants further appreciate the Examiner's acceptance of the drawings filed on July 23, 2001.

Applicants further appreciate the Examiner's consideration of applicants' Information Disclosure Statements, filed September 27, 2001 and October 24, 2003.

Claims 1-19 are presented to the Examiner for further or initial prosecution on the merits.

A. Introduction

In the outstanding Office action, the Examiner objected to the specification, rejected claims 1-6 and 12-15 under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement, rejected claims 1, 5-7, 9, 11, 12 and 15 under 35 U.S.C. § 103(a) as being unpatentable over the Applicant Admitted Prior Art (AAPA) in view of U.S. Patent No. 5,634,199 to Gerlach et al. ("the Gerlach '199 reference") in further view of Hottinen et al. "Transmit Diversity using Filtered Feedback Weights in the FDD/WCDMA System", 2000 IEEE, February 2000, pages 15-21 ("the Hottinen et al. reference"), rejected claim 2 under 35 U.S.C. §103(a) as being unpatentable over the APAA in view of the Gerlach '199 and the Hottinen et al. references, further in view of U.S. Patent 5,471,647 to Gerlach et al. ("the Gerlach '647 reference"), and indicated that claims 3, 4, 8, 10 and 13-14 recite allowable subject matter.

B. Asserted Objections to the Specification

In the outstanding Office action, the Examiner objected to the Specification for containing duplicate pages and duplicate matter on different pages. By the instant amendment, the first occurrence of page 1 and page 29 have been deleted in their entirety.

The Examiner also objected to the title as not being descriptive. The title has been amended generally as suggested by the Examiner.

The Examiner also noted inconsistencies on page 5, line 6 and page 6, lines 10-11. These have been corrected by the instant amendment as suggested by the Examiner.

Therefore, it is respectfully submitted that the instant amendment addresses all of the objections, and it is respectfully requested that these objections be withdrawn.

C. Asserted Rejection of Claims 1-6 and 12-15

In the outstanding Office action, the Examiner rejected claims 1-6 and 12-15 under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. Claims 1 and 12 have been amended to be consistent with the changes made to pages 5 and 6 of the specification above. Therefore, it is respectfully submitted that these claims are enabled by the specification, and it is respectfully requested that this rejection be withdrawn.

D. Asserted Obviousness Rejections of Claims 1, 2, 5-7, 9, 11, 12 and 15

In the outstanding Office action, the Examiner rejected claims 1, 5-7, 9, 11, 12 and 15 under 35 U.S.C. § 103(a) as being unpatentable over the AAPA in view of the Gerlach '199 reference further in view of the Hottinen et al. reference, and rejected claim 2 under 35 U.S.C. § 103(a) as being unpatentable over the APAA in view of the Gerlach '199 and the Hottinen et al. references, further in view of the Gerlach '647 reference. These rejections are respectfully traversed for at least the reasons set forth below.

All of the independent claims 1, 7, 11 and 12 recite using complex basis vectors to select an antenna from the plurality of antennas. For example, claim 1 recites, in part, “transmitting antenna selection information;” claims 7 and 11 each recite, in part, “transmitting the signal to the mobile station through a corresponding antenna;” and claim 12 recites, in part, “generating feedback information for antenna selection.”

The Hottinen et al. reference is relied on by the Examiner as teaching the use of complex weighting vectors. First, it is respectfully submitted that these complex weighting vectors are not equal to the complex basis vectors recited in the pending claims. As can be seen in claims 7, 11 and 12, and as shown, for example, in the equation on page 26, line 12, the complex weight may be determined from the complex basis vector set. Further, since the Hottinen et al. reference is directed to a maximum ratio combining (MRC) method, in which the power of all antennas is combined, rather than selecting one from a plurality of antennas, as in the SC method of the present invention, and as clearly recited in the independent claims, absent the teachings of the present invention, there is no disclosure or suggestion to combine any complex basis vector of the Hottinen et al. reference with the SC method of the AAPA.

Further, the Gerlach '647 reference additionally relied on in rejecting claim 2 fails to provide these teachings.

Therefore, it is respectfully submitted that neither AAPA, the Gerlach '199 reference, the Hottinen et al. reference, nor the Gerlach '647 reference, either alone or in combination, disclose or suggest the present invention as recited in the independent claims. The remaining rejected claims depend, either directly or indirectly, from corresponding ones of the base claims, and are therefore believed to be allowable for at least the reasons set forth above. Therefore, it is respectfully requested that these rejections be withdrawn.

E. New Claims

Claims 15-19 depend from claims 1, 7, 11 and 12, respectively, and further recite that the basis vector set is an orthonormal vector set, as disclosed, for example, on page 8, line 19 to page 9, line 3 of the original specification. These claims are believed to be allowable for at least the reasons their respective base claims are considered allowable.

F. Allowable Subject Matter

The indication that claims 3, 4, 8, 10 and 13-14 contain allowable subject matter is gratefully acknowledged. However, it is respectfully submitted that all of the claims are in condition for allowance for at least the reasons set forth above.

G. Conclusion

Since the cited prior art references neither anticipate nor render obvious the subject invention as presently claimed, applicants respectfully submit that claims 1-19 are now in condition for allowance, and a notice to that effect is respectfully requested.

If the Examiner believes that additional discussions or information might advance the prosecution of the instant application, the Examiner is invited to contact the undersigned at the telephone number listed below to expedite resolution of any outstanding issues.

In view of the foregoing amendments and remarks, reconsideration of this application is earnestly solicited, and an early and favorable further action upon all the claims is hereby requested.

Respectfully submitted,

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Date: January 17, 2006

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PETITION and
DEPOSIT ACCOUNT CHARGE AUTHORIZATION

This document and any concurrently filed papers are believed to be timely. Should any extension of the term be required, applicant hereby petitions the Director for such extension and requests that any applicable petition fee be charged to Deposit Account No. 50-1645.

If fee payment is enclosed, this amount is believed to be correct. However, the Director is hereby authorized to charge any deficiency or credit any overpayment to Deposit Account No. 50-1645.

Any additional fee(s) necessary to effect the proper and timely filing of the accompanying-papers may also be charged to Deposit Account No. 50-1645.